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Number of Pages (including this page)

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Applicant(s): Swope et al. Art Unit: 2111
Appln. No.: 09/895,506 Examiner: Tim VO
Filed: June 29, 2001 Attorney Docket No.: CM03553J
Title: Self-Extracting Re-Configurable Interface Used In Modular Electronic Architectures

I hereby certify that the following papers:

Transmittal Form - 1 page
Amended Appeal Brief - 13 pages

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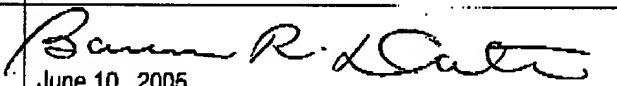
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June 10, 2005
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TRANSMITTAL FORM <small>(to be used for all correspondence after initial filing)</small>	Application Number	09/895,506		
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	First Named Inventor	Charles B. SWOPE		
	Group Art Unit	2111		
	Examiner Name	Tim VO		
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ENCLOSURES		(check all that apply)
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Docket No. CM03553J

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPLICANT: SWOPE ET AL. ART UNIT: 2111
APPLN. NO.: 09/895,506 EXAMINER: VO, TIM
FILED: JUNE 29, 2001
TITLE: SELF-EXTRACTING RE-CONFIGURABLE INTERFACE USED IN
MODULAR ELECTRONIC ARCHITECTURES

AMENDED APPEAL BRIEF

Mail Stop Appcal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Attention: Board of Patent Appeals and Interferences

Dear Chief Administrative Patent Judge:

In response to the Notification of Non-Compliant Appeal Brief dated May 13, 2005, applicant hereby submits an amended Appcal Brief in which Items 4, 5 and 10, raised by the Examiner have been addressed.

This Appeal Brief is in furtherance of the Notice of Appeal, transmitted via facsimile on March 31, 2005.

The fees required under 37 C.F.R. § 41.20(b)(2), and any required petition for extension of time for filing this Appeal Brief are dealt with in the accompanying Transmittal Form.

This brief is being transmitted by facsimile pursuant to 37 C.F.R. § 1.6(d).

This brief contains items under the headings listed in the following Table of Contents, and in the order indicated in 37 C.F.R. § 41.37(c).

Application No. 09/895,506
June 10, 2005
Page 2 of 13

Docket No. CM03553J

TABLE OF CONTENTS

	Page
I. Real Party in Interest	3
II. Related Appeals and Interferences	3
III. Status of Claims	3
IV. Status of Amendments	3
V. Summary of the Claimed Matter	4-6
VI. Grounds of Rejection for Review on appeal	6
VII. Argument.....	6-10
IX. Claims Appendix.....	11-13

Application No. 09/895,506
June 10, 2005
Page 3 of 13

Docket No. CM03553J

I. REAL PARTY IN INTEREST

The real party of interest is Motorola, Inc., a Delaware corporation.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF CLAIMS

This is an appeal from the final rejection of claims 1-3, 6, 7, 9-12 and 14-16 of the above-referenced application.

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

Claims in the application are: 12

B. STATUS OF ALL THE CLAIMS

1. Claims allowed: none
2. Claims objected to: none
3. Claims rejected: all

C. CLAIMS ON APPEAL

The claims on appeal are: 1-3, 6, 7, 9-12 and 14-16

IV. STATUS OF AMENDMENTS

A Final Rejection was mailed January 6, 2005 in response to an Amendment filed September 20, 2004. The Amendment and arguments were considered by the Examiner, but deemed not persuasive. Applicants faxed a Notice of Appeal on March 31, 2005. This Appeal Brief is submitted in support of the Notice of Appeal.

Application No. 09/895,506
June 10, 2005
Page 4 of 13

Docket No. CM03553J

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The claimed subject matter pertains to a re-configurable interface used in modular electronic architectures. As seen in FIG. 2, the re-configurable interface includes a host (203) and one or more modules (201) for interfacing with the host (203) to provide additional functionality. The host (203) has no prior configuration information pertaining to the one or more modules (201). A configuration controller (209) located in the host (203) reads a memory device (215) located in the module (201), the memory device provides configuration information to the host. The pin controller (209) is then able to reconfigure pins of the host connector (207) to communicate with the module (201).

Per independent claim 1, a re-configurable interface (200) used in modular electronic architectures comprises:

- a host (203) (page 2, line 30-33);

- at least one module (201) for interfacing with the host (203) to provide additional functionality to the host, the host having no prior configuration information pertaining to the at least one module (page 2, lines 33-34 to page 3, line 1 and page 4, lines 16-18);

- a configuration controller (209) located in the host (203) for reading at least one memory device (215) located in the at least one module for providing configuration information to the host (page 3, lines 15-17);

- a configurable logic (page 3, lines 13-15) operating with the configuration controller (209) for configuring a host interface (207) to operate with an at least one module interface (205) (page 3, lines 15-26); and

- a plurality of connector pins (219) at the host (203) and at least one module (201)

Application No. 09/895,506
June 10, 2005
Page 5 of 13

Docket No. CM03553J

that are electrically configured using the configurable logic. (page 3, lines 23-26).

Per independent claim 7, a re-configurable electronic interface system for providing communication between a primary host device and a secondary accessory device comprises:

an interface controller (209) including re-configurable logic (page 3, lines 13-15) associated with the primary host device (203), the primary host device having no prior configuration information pertaining to the secondary accessory device (201) (page 4, lines 17-19);

at least one memory device (215) associated with the secondary accessory device (201) for communicating configuration information to the interface controller (209) (page 3, lines 15-17);

a plurality of electrical interface pins (219) for connecting the primary host device (203) and the secondary accessory device (201) (page 3, lines 26-2); and

wherein the interface controller (209) sets the re-configurable logic (page 3, lines 13-15) of the re-configurable electronic interface system based on information from the at least one memory device (215) for allowing compatibility between the secondary accessory device (201) and the primary host device (203) by configuring the plurality of electrical interface pins 219 according to the re-configurable logic (page 3, lines 27-30).

Per claim 12, a method of reconfiguring an interface used in a modular electronic architecture between a primary host device (201) and a secondary module device (203), the primary host device having no prior configuration information (page 4, lines 17-19) pertaining to the secondary module (203), comprises the steps of:

providing an interface controller (209) associated with the primary host device (203) (page 3, lines 6-7);

Application No. 09/895,506
June 10, 2005
Page 6 of 13

Docket No. CM03553J

reading configuration information from at least one memory (215) associated with the secondary module device (201) (page 3, lines 15-17);

setting configurable logic in the primary host device (203) such that an electrical interface (217) is established between the primary host device (203) and the secondary module device (201) (page 3, lines 22-26); and

configuring a plurality of pins in the interface (219 of 207) to provide capability between the primary host device (203) and the secondary module device (201) (page 3, lines 26-30; page 4, lines 3-7).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-3, 6, 7, 9-12 and 14-16 were rejected under 35 U.S.C. 102(e) over U.S. Patent No. 6,687,814 to Duppong.

VII. ARGUMENT

Claims 1-3, 6, 7, 9-12 and 14-16 are patentable under 35 U.S.C. 102(e) over U.S. Patent No. 6,687,814 to Duppong.

On page 2, item 2 of the Final Office Action, the Examiner attempts to equate the elements of Applicants' claimed invention with elements taught in Fig. 1 of the Duppong reference. Each element cited by the Examiner falls within blocks (10) and (20) of Duppong.

Application No. 09/895,506
June 10, 2005
Page 7 of 13

Docket No. CM03553J

The Duppong reference, however, teaches a three-part system requiring: a controller (10); an application attachment (20); and an electronic circuit (30). The application attachment (20) operates as a "bridge". All of the embodiments taught by Duppong require that the application attachment (20) be attached to the controller (10) and that the electronic circuit (30) be attached to the application attachment (20), as shown in Fig 1. Further examples of the Duppong reference requiring the use of a "bridging" device to connect (10) to (30) are found in col. 4, lines 65-67 and col. 5, lines 1-5 and the independent claims. Applicants' invention, as claimed in independent claims 1, 7 and 12, utilizes only a host 203 and a module 201 and is therefore a two-part system – not a three part system.

Applicants argued in the response of September 20, 2004 that Duppong's controller (10) does not take on additional functionality without electronic circuit (30). The Examiner countered on page 3 of the Final Action that module (20) provides additional functionality to the host (10), referring to column 3, lines 53-59 of Duppong. However, this example cited by the Examiner even states that these programs relate to electronic circuit (30). Thus, even if Duppong's CPU were to run the programs from flash memory (206), no additional functionality would occur without electronic circuit (30) being attached. Applicants maintain that, Duppong's system will not provide additional functionality to controller (10) unless all three devices controller (10) application attachment (20) and electronic circuit (30) are present.

On page 4, lines 4-7 of the Final Action, the Examiner deemed that Applicants arguments of a two-part system over Duppong's three part system were irrelevant and that Duppong's

Application No. 09/895,506
June 10, 2005
Page 8 of 13

Docket No. CM03553J

application attachment (20) and electronic circuit (30), when combined, provide for one part. However, Applicants disagree in that the only way application attachment (20) and electronic circuit (30) are ever combined is through the use of a multi-pin plug connector (202) mounted on housing (200) or attached by a cable as taught in column 3, lines 2-13 and Figure 1 of Duppong. Applicants assert that Duppong requires a new attachment (20) for each new electronic circuit (30). Support for this assertion is taught in column 3, line 47-50 where Duppong teaches that an application attachment (20) matching the electronic circuit (30) is attached to the controller (10) and the electronic circuit (30). Furthermore, in column 3, lines 59-63, Duppong teaches that an operator chooses a new application attachment (20) when the operator desires to use the controller (10) with a different electronic circuit (30).

Applicants claim in independent claim 1, 7 and 12 that the host 203 has no prior configuration information pertaining to the at least one module 201. On page 4 lines 9-14 of the Final Action, the Examiner stated that Duppong's controller (10) does not have prior configuration information. Applicants disagree in that the Duppong requires that the user select an "application operation" before any interface configuration can occur (see program flowchart in Fig 2.). Applicants' configuration, on the other hand, is completed simply by attaching the module 201 to the host 203. The user is not required to select an application operation, as required by Duppong. Thus, Applicants' invention provides a significant advantage over Duppong. These advantages were described on page 4, lines 7-16 as applicants' specification as follows:

Application No. 09/895,506
June 10, 2005
Page 9 of 13

Docket No. CM03553J

"[I]t is the great benefit of this invention that all that is required to establish communication is for the host and module connectors to inter-connect in order to communicate. Thus, any module 201 having an associated memory device 215, communicating configuration information to pin controller 209 can be compatible. This enables any type of module such as an accessory device to be used with the host device 203 without the need for constant "hard" wire interface compatibility.

Duppong's system suffers from the disadvantage that it must have its FLASH memory pre-store the software in order for the controller (10) to be able to communicate with device (30) - (See: column 3, lines 53-56). Thus, an almost unlimited number of physical "bridges" must exist in order for the Duppong patent to really be compatible with other circuit devices.

Applicants' invention, on the other hand, claims "at least one memory device located in the at least one module for providing configuration information to the host". Each new module that gets attached to the host contains its own configuration information to mate to the host device. Therefore, Applicants have overcome the need for a "bridging" interface that is only useful for one possible configuration.

The remaining dependent claims provide further limitations to the independent claims.

In summary, Applicants respectfully submit that the prior art of record taken individually or combined utterly fails to teach or suggest the recitations of claims 1-3, 6, 7, 9-12 and 14-16.

Docket No. CM03553J

Conclusion

For the reasons set forth above, and as is apparent from a review of the above-cited reference, the pending claims 1-3, 6, 7, 9-12 and 14-16 present patentable subject matter such that reversal of the rejection is appropriate.

Respectfully submitted,

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Application No. 09/895,506
June 10, 2005
Page 11 of 13

Docket No. CM03553J

IX. CLAIMS APPENDIX

1. A re-configurable interface used in modular electronic architectures comprising:
 - a host;
 - at least one module for interfacing with the host to provide additional functionality to the host, the host having no prior configuration information pertaining to the at least one module;
 - a configuration controller located in the host for reading at least one memory device located in the at least one module for providing configuration information to the host;
 - a configurable logic operating with the configuration controller for configuring a host interface to operate with an at least one module interface; and
 - a plurality of connector pins at the host and at least one module that are electrically configured using the configurable logic.
2. A re-configurable interface as in claim 1, wherein the configuration controller self-extracts the configuration information from the at least one memory device after interfacing with the at least one module with the host.
3. A re-configurable interface as in claim 1, further including a dedicated serial interface for exchanging information from the at least one memory device to the configuration controller.
4. canceled
5. canceled
6. A re-configurable interface as in claim 1, further including a microprocessor for communicating with the configuration controller.

Application No. 09/895,506
June 10, 2005
Page 12 of 13

Docket No. CM03553J

7. A re-configurable electronic interface system for providing communication between a primary host device and a secondary accessory device comprising:

an interface controller including re-configurable logic associated with the primary host device, the primary host device having no prior configuration information pertaining to the secondary accessory device;

at least one memory device associated with the secondary accessory device for communicating configuration information to the interface controller;

a plurality of electrical interface pins for connecting the primary host device and the secondary accessory device; and

wherein the interface controller sets the re-configurable logic of the re-configurable electronic interface system based on information from the at least one memory device for allowing compatibility between the secondary accessory device and the primary host device by configuring the plurality of electrical interface pins according to the re-configurable logic.

8. canceled

9. A re-configurable electronic interface system as in claim 7, wherein the interface controller self-extracts the configuration information from the at least one memory device.

10. A re-configurable electronic interface system as in claim 7, wherein the interface controller and at least one memory device communicate via a dedicated serial interface.

11. A re-configurable electronic interface system as in claim 7, wherein the interface controller communicates with a microprocessor.

12. A method of reconfiguring an interface used in a modular electronic architecture

Application No. 09/895,506
June 10, 2005
Page 13 of 13

Docket No. CM03553]

between a primary host device and a secondary module device, the primary host device having no prior configuration information pertaining to the secondary module, comprising the steps of:

- providing an interface controller associated with the primary host device;
- reading configuration information from at least one memory associated with the secondary module device;
- setting configurable logic in the primary host device such that an electrical interface is established between the primary host device and the secondary module device; and
- configuring a plurality of pins in the interface to provide capability between the primary host device and the secondary module device.

13. canceled

14. A method of reconfiguring an interface as in claim 12, further comprising the step of: self-extracting the configuration information from the at least one memory when the secondary module device is connected with the primary host device.

15. A method of reconfiguring an interface as in claim 12, further comprising the step of: communicating between the interface controller and the at least one memory via a dedicated serial interface.

16. A method of reconfiguring an interface as in claim 12, further comprising the step of: controlling the interface controller using a microprocessor.